

C1 1. (twice amended) An additive for conglomerate building materials selected from gypsum and mortar; that comprises a solid mineral component comprised of clay, and at least a modified natural gum, the additive being free of cellulose derivatives, wherein the solid mineral component is a rheological grade sepiolite.

C2 7. (twice amended) An additive according to claim 5, wherein the combination of monosaccharides is a galactomanane.

C3 11. (amended) A method of using the additive of claim 1 as a component in a mortar, the method comprising adding the additive to the mortar.

#### **REMARKS**

Claims 1-3 and 5-12 are pending in the application. Of these, the Examiner had withdrawn claims 9, 10, and 12 from consideration. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned "Version with markings to show changes made."

#### **The Rejections Under §102 and §103**

In the Office Action mailed December 12, 2001, the Examiner had rejected claims 1-3, 5-8, and 11 under §102(b) as anticipated by, or, alternatively, under §103 as obvious over Patel, Chaux et al, Ricci et al, Keilhofer et al, Cowan et al, Carpenter et al, Carter, or Barat (FR 1505541). Applicants request withdrawal of the rejections and reconsideration of the claims; and, as the arguments set forth hereinafter fully support,

strongly contend that none of the prior art references disclose or suggest the essential elements of the pending claims, namely:

- i) an additive for building materials;
- ii) comprising a solid mineral component that is **rheological grade sepiolite** and at least a modified natural gum;
- iii) the additive being free of cellulose derivatives.

All of the cited references belong to distant fields and refer to compositions which are subject to requirements that are absolutely different from the properties necessitated in special mortars and gypsum. Furthermore, it seems that the Examiner has overlooked the fact that rejected Claim 1 clearly limited the scope of the instant claimed invention to rheological grade sepiolite, as the Examiner does not even use this terminology in the second Official Action.

The examiner contends that **Patel** teaches a composition which is added as viscosifying agent or additive which comprises guar and a clay such as sepiolite, and that thus the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **Patel**, however, differ from the instantly claimed invention in that

- they are for drilling fluids, milling fluids, mining fluids, water-based paints and water-based metal working fluids, and are intended to viscosify a clay-containing fluid, but not for special mortars or gypsum i.e. they are additives for clay-containing final fluids;

- they are not free of cellulose derivatives in as much as the cellulose derivative comprises cellulose ether (cf. claim 1); and
- they contain conventional sepiolite instead of rheological grade sepiolite.

The examiner also contends that **Chaux et al.** teach a composition comprising guar gum and an argilla which can be sepiolite, and that thus the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **Chaux et al.** differ from the instantly claimed compositions in that:

- they are additives for dispersal in an aqueous medium (cf. claim 1) and not additives for special mortars or gypsum;
- they contain water (cf. claim 1); and
- they contain conventional sepiolite instead of rheological grade sepiolite.

The examiner further contends that **Ricci et al.** teach a rheological additive for aqueous systems comprising a clay such as sepiolite and a polymeric material which can include a series of gums. The examiner thus concludes that the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **Ricci et al.** differ from the instantly claimed invention in that they:

- are thickener compositions for thickening aqueous systems for paints, latex paints, coatings for paper and the like (cf. col. 1, lines 23-31) but not additives for

special mortars or gypsum and in fact are not even within the field of building materials;

- contain starch or a starch derivative as an indispensable third component to achieve suitable viscosity (e.g. col. 3, lines 38-54); and
- they contain conventional sepiolite instead of rheological grade sepiolite.

The examiner also contends that **Keilhofer et al.** teach a composition comprising a clay mineral such as sepiolite and a polysaccharide such as guar gum which is used as an additive i.e. as a thickening agent for drilling fluids. The examiner thus concludes that the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **Keilhofer et al.** differ from the instantly claimed invention in that they:

- are thickener compositions for thickening aqueous drilling fluids but not additives for special mortars or gypsum;
- contain conventional sepiolite instead of rheological grade sepiolite.

The examiner also contends that **Cowan et al.** teach a cement coated sorbent comprised of guar gum soluble polymer and a water sorption capacity powdered clay such as sepiolite. The examiner thus concludes that the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **Cowan et al.** differ from the instantly claimed invention in that they:

- are animal litter compositions and used as sorbents for aqueous liquids such as urine (e.g. col. 1, lines 11-13) but not additives for special mortars or gypsum;
- lead to final granulate litter materials that cohere when being wetted; and
- contain conventional sepiolite instead of rheological grade sepiolite.

The examiner also contends that **Carpenter et al.** teach a composition being used as spacer fluid comprising sepiolite clay and a natural modified gum. The examiner thus concludes that the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **Carpenter et al.** differ from the instantly claimed invention in that they:

- are spacer fluids to be used in drilling but not additives for special mortars or gypsum; and
- contain conventional sepiolite instead of rheological grade sepiolite.

The examiner furthermore contends that **Carter '023** teaches a composition being used as spacer fluid comprising sepiolite clay and a natural modified gum. The examiner thus concludes that the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **Carter '023** differ from the instantly claimed invention in that they:

- are animal litter sorbent compositions for sorbing liquid excrements i.e. granulate litter materials that agglomerate into clumps upon being wetted (e.g. col. 3, lines 10-15) but not additives for special mortars or gypsum;
- comprise a boron-based cross-linking agent; and
- contain conventional sepiolite instead of rheological grade sepiolite.

The examiner moreover contends that **FR'541 (Barat)** teaches a composition comprising sepiolite clay and guar gum. The examiner thus concludes that the instantly claimed invention, if not anticipated, is rendered obvious by this reference.

The compositions disclosed in **FR'541** differ from the instantly claimed invention in that they

- are sprayable compositions for forest fire prevention and extinction; and
- contain conventional sepiolite instead of rheological grade sepiolite.

Applicants according strongly contend that, in light of the above, it should be concluded that none of the cited prior art references discloses: i) an additive for special mortars or gypsum; ii) using rheological grade sepiolite as component of an additive for special mortars and gypsum. Therefore, the cited references cannot anticipate the instantly claimed invention.

The Examiner has also applied the references under 35 U.S.C. §103 contending that they individually and in combination, render the claimed invention obvious.

Applicants detailed review of the references presented above reveals the shortcomings of each and it is contended, fails to present any unifying teaching from among the

references, that would render their combination appropriate under the strictures of this statutory provision. That is, none of the references contains within its scope and disclosure the suggestion that the claimed invention could be prepared. In fact, nothing in any of the references cited on the record reveals a recognition of the problem faced by the present Applicants.

In this connection, the Examiner is referred to the decision of *In re Sponnoble*, which is considered seminal in this particular regard. (*In re Sponnoble* 160 U.S.P.Q. 237, 243 (C.C.P.A. 1969).) In that decision, the Court remarked as follows:

*A patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the 'subject matter as a whole' which should always be considered in determining the obviousness of an invention under 35 U.S.C. 103 (cases cited). The Court must be ever alert not to read obviousness into an invention on the basis of the applicants' own statements; that is, we must view the prior art without reading into that art applicants' teaching (cases cited). The issue, then, is whether the teachings of the prior art, in and of themselves and without the benefits of applicants' disclosure, make the invention as a whole, obvious." To the same effect is In re Nomiya, Kohisa, and Matsumura, 184 U.S.P.Q. 607, 612 (C.C.P.A. 1975).*

As noted, the present invention does not find even its recognition in the cited prior art, let alone the seeds for its solution. Thus, each of the compositions recited in the references presented by the Examiner fails to direct itself to the technical field and product of the present invention and, understandably, fails to appreciate the problems

that the present Applicants faced when the mortar composition of the present invention was under development. It is therefore manifest that the absence of such teachings prevents the proper combination of these references as there is an absence of the suggestion that the present formulation and composition is either necessary or should or could be developed. At best, the combination of the references in the manner proposed by the Examiner constitutes impermissible hindsight reconstruction, which this decision and others both previous to and following have expressly refuted. For this further reason, Applicants believe that the rejection as it may be based on 35 U.S.C. §103 is inapt and withdrawal of the rejection is accordingly requested.

**The Rejections Under 35 USC §112, first paragraph, and §132**

The Examiner had also rejected claims 1-3, 5-8, and 11 under the first paragraph of 35 USC §112 and 35 USC §132 on the ground that the specification as originally filed would not appear to provide support for the now-claimed invention. More specifically, the Examiner asserted that the term “free of cellulose derivatives” amounted to new matter.

While Applicants acknowledge that the literal English text of the application does not contain this phrase but rather contains the more awkward translation of the original Spanish phrase “free of cellulose-like derivatives” (page 3, lines 21-22 of the Description). Applicants maintain that the term “free of cellulose derivatives” is in fact a more accurate translation of the original Spanish phrase “*libre de derivados celulosicos*” which appeared in and is supported by the original Spanish text of the PCT application on which the instant U.S. case is based. While Applicants believe this explanation to be



sufficient to show support for the use of the phrase in the claims, if the Examiner should wish amendment of the specification to reflect this clarification, Applicants will gladly do so upon the Examiner's request.

**The Rejections Under 35 USC §112, second paragraph**

The Examiner moreover rejected claims 1-3, 5-8, and 11 as failing to set forth the subject matter which the applicant regards as the invention. Specifically, the Examiner objected to the term "special mortar" as vague. Applicants have deleted this term from the claims but have maintained it in the specification and contend that the term "special mortar" is a well-known, accepted, and widely used term in the field of building materials. In support of this assertion, Applicants refer the Examiner to the following documents, for which the Applicants request official recognition and recordation and have accordingly forwarded copies herewith along with an Information Disclosure Statement.

(i) Domínguez Bidagor, J.R. and Adrados Gautier, L.F.: "Morteros y Aditivos", CEMENTO·HORMIGÓN, 774, (August 1997), pp. 1040-1056, stating the origin of the term special mortars (cf. page 1041, third full paragraph: "Mortars for reparation, tile gluing, refractories and ceramics ... due to their specific requirements which make them to be defined as special mortars");

(ii) a copy of a page of the Website of the European Mortar Industry Organization showing that this organization has a specific subcommittee for special mortars;

- (iii) a copy of a page of the Website of Super-Tec Products, Inc. describing a range of commercially available special mortars;
- (iv) a copy of a page of the Website of Edilcol Italia S.r.l. describing a further range of commercially available special mortars; and
- (v) a copy of pages of the Website of Quimivisa describing a further range of special mortars.

According to these documents, special mortars are for example those mortars that are systems for securing EPS Board and embedding reinforcing meshes, glass block mortars, fast setting fixture mounting compounds, cement- based patching compounds, cement waterproofing compounds, cement-stucco mixes (cf. enclosure iii), cements for insulating walls and plastering rough-cast to firstly prepare walls, cements for restoration and repairs on concrete and reinforced concrete surfaces, cements for restoring concrete, repair crubs and crumblings (cf. enclosure iv), self-leveling mortars, solvent-free anchoring mortars, mortars for restoring concretes and rough plasters, quick-setting mortars, hydraulic quick-setting cements for sealing water escapes, high-resistance non-retracting fluid mortars, sealing cements (cf. enclosure v).

In view of the above, and further in view of that the European Mortar Industry Organization even has a subcommittee for special mortars, it is submitted that the term "special mortar" is an admissible technical term.

The Examiner had also rejected claim 1 and its dependent claims on the ground that the Markush language "selected from" in rejected claim 1 was improper.

Applicants have herein again amended claim 1 so that the (now twice-amended) claim 1 is no longer recites the Markush language "*selected from among clay and at*

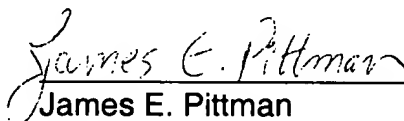
*least a modified natural gum*" that the Examiner asserted was indefinite because of the usage of the conjunction "and" directly following the Markush language.

Notwithstanding the amendment to claim 1, Applicants wish to point out that rejected claim 1 was clearly limited to additives comprising both the rheological grade sepiolite and at least one modified gum. Rejected claim 1 recites that the additive comprises a *solid mineral component selected among clay and at least a modified natural gum*. As a modified natural gum obviously cannot be a solid mineral component or a clay, the phrase *selected among* can obviously refer only to the solid mineral clay, so that rejected claim 1 clearly postulates the presence of rheological grade sepiolite and one or more modified natural gums.

No additional fees are believed to be necessitated by the foregoing Response. However, should this be erroneous, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment, or credit any overages.

Respectfully submitted,

KLAUBER & JACKSON

  
James E. Pittman  
Attorney for Applicants  
Registration No. 47,860

Klauber & Jackson  
411 Hackensack Avenue  
Hackensack, NJ 07601  
(201) 487-5800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : Antonio Alvarez Berenguer et al.  
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FILED : December 19, 2000 ART UNIT : 1755  
FOR : ADDITIVE FOR SPECIAL PLASTERS AND MORTARS,  
COMPOSITIONS CONTAINING THE ADDITIVE AND  
UTILIZATION OF THE ADDITIVE IN SPECIAL PLASTERS AND  
MORTARS (as amended)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

COPY OF PAPERS  
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*needs to be "selected from the group consisting of"*

1. (twice amended) An additive for conglomerate building materials selected from gypsum and [special] mortar, that comprises a solid mineral component [selected from among] comprised of clay<sub>1</sub> and at least a modified natural gum, the additive being free of cellulose derivatives, wherein the solid mineral component is a rheological grade sepiolite [and mixtures thereof and wherein the additive is free of cellulose derivatives].

7. (twice amended) An additive according to claim 5, wherein the combination of monosaccharides is a galactomanane.

11. (amended) [Use of an] A method of using the additive [according to] of claim 1[,] as a component in a [special] mortar, the method comprising adding the additive to the mortar.